FEDERAL INFORMATION
PROCESSING STANDARDS PUBLICATION 1
November 1, 1968

CODE FOR INFORMATION INTERCHANGE

>   Hardware Standard
>   Interchange
>   Codes and Media

U.S. Department of Commerce/National Bureau of Standards

Foreword

The Federal Information Processing Standards Publication Series of the National Bureau of Standards is the official publication within the Federal Government for information relating to standards which are adopted and promulgated under the provisions of Public Law 89-306 and Bureau of the Budget Circular A-86 titled, Standardization of data elements and codes in data systems. These publications collectively constitute the FEDERAL INFORMATION PROCESSING STANDARDS REGISTER.

The publications in this series are used to announce and maintain Federal Information Processing Standards. Also, these publications are issued to provide standards information of a general interest and a complete index of relevant standards publications and specifications.

Publications in this series which announce the adoption of standards provide necessary policy, administrative, and guidance information for their effective implementation and utilization. In most cases, a copy of the technical specifications of the standard is affixed to the announcing publication. When this is not possible, the source where copies of the standards specification can be obtained will be cited.

Suggestions for improvement which are gained by the use of Federal Information Processing Standards and Publications are welcomed. These should be addressed to the National Bureau of Standards, Center for Computer Sciences and Technology, Office for Information Processing Standards, Washington. D.C. 20234.

A. V. ASTIN, *Director*

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Federal Information

ANNOUNCING THE STANDARD FOR

CODE FOR INFORMATION INTERCHANGE

Federal Information Processing Standards Publications are issued by the National Bureau of Standards under the direction of the Bureau of the Budget in accordance with the provisions of Public Law 89-306 and Bureau of the Budget Circular No. A-86.

Name of Standard.   Code for Information Interchange (also commonly Known as ASCII, "Ask-Ee"), (FIPS 1).

Category of Standard.   Hardware Standard, Interchange Codes and Media.

Explanation. The standard specifies a code and character set for use in Federal information processing systems, communications systems, and associated equipments.

Approving Authority.   White House memorandum to heads of departments and agencies, dated March 11, 1968, signed by Lyndon B. Johnson, President of the United States.

Maintenance Agency.   Department of Commerce, National Bureau of Standards (Center for Computer Sciences and Technology).

Cross Index.
>   a. USA Standard X3.4-1967-Standard Code for Information Interchange
>   b. USA Standard X3.4-1968-Standard Code for Information Interchange (revision of X3.4-1967)
>   c. ISO Recommendation R646-Six and Seven Bit Coded Character Sets for Information Processing Interchange. (Available from the United States of America Standards Institute at $6.00 a copy.)

Applicability.   Generally applicable to the representation of character coded information in information interchange and files used in data processing, communications, and related equipments. The Secretary of Commerce by separate letter addressed to the heads of Federal departments and agencies will provide details concerning implementation plans and specific areas of application. When released, information concerning this letter and the applicability of the standard will be the subject of a future FIPS PUBLICATION. Information concerning the use of the standard in communications systems may be obtained from the Manager, National Communications System, Attention: NCS-O, Washington, D.C. 20305.

Implementation Schedule.   All computers and related equipment configurations brought into the Federal Government inventory on or after July 1, 1969, must have the capability to use this standard.

Specifications.   This standard adopts in whole the USA Standard Code for Information Interchange X3.4-1967 and in part X3.4-1968 (a revision of X3.4-1967) which have been developed and approved by the United States of America Standards Institute. That portion of X3.4-1968 which has not been adopted in the Federal standard is the "New Line" (NL) convention as cited in the definition of LF (Line Feed) in Section 5.1, page 8, and paragraph A7.6 of Appendix A, Section A7, page 13.

Qualifications.   As contained in the specifications of the standard and as clarified by the Secretary of Commerce letter addressed to heads of Federal departments and agencies. (See Applicability paragraph above).

Where to Obtain Copies of the Specifications of the Standard.

　　　a. Federal Government activities should obtain copies from established sources within each agency. When there is no established source, purchase orders should be submitted to the General Services Administration, Specifications Activity, Printed Materials Supply Division, Building 197, Naval Weapons Plant, Washington, D.C. 20402. Refer to Federal Information Processing Standard 1 (FIPS 1). Price 40 cents a copy.

　　　b. Others may obtain copies from the United States of America Standards Institute, 10 East 40th Street, New York, New York 10016. Refer to CSA Standard X3.4-=1968. Standard Code for Information Interchange. (Price $2.00 a copy. Discounts are available on quantity orders. See USASI catalog.)

　　　c. Copies of X3.4-1967. USA Standard Code for Information Interchange (earlier version of X3.4-1968) can be revised to reflect the modifications made in the 1968 version by making the following changes:

Reference p. 7-
　　　Change title of Section 3 to read:
　　　　　3. Character Representation and Code Identification

　　　Add to end of the existing Section 3:
　　　The standard code may be identified by the use of the notation "ASCII" or "USASCII".
　　　The notation "ASCII" (pronounced as'-key) or "USASCII" (pronounced you-sas'key) should ordinarily be taken to mean the code prescribed by the latest issue of the standard. To explicitly designate a particular (perhaps prior) issue, the last two digits of the year of issue may be appended, as "ASCII 63" or "USASCII 63".

Reference p. 8-
　　　Add to the definition of LF (Line Feed) :

Where appropriate, this character may have the meaning "New Line" (NL), a format effector which controls the movement of the printing point to the first printing position on the next printing line. Use of this convention requires agreement between sender and recipient of data.

Reference p. 13-

Add to Appendix A, Section A 7. :

A7.6   The function "New Line" (NL) was associated with LF (rather than with CR or with a separate character) to provide the most useful combinations of functions through the use of only two character positions, and to allow the use of a common end-of-line format for both printers having separate CR-LF functions and those having a combined (i.e., NL) function. This sequence would be CR-LF, producing the same result on printers of both classes, and would be useful during conversion of a sys tern from one method of operation to the other.

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